

where ϕ_w is a diameter in mm of a 90% encircled energy of a point spread function by amplitude by an optical system at an f number of F5.6 at substantially the center of an image plane and a wavelength e-line, from which a low-pass action due to an optical low-pass filter is eliminated or alternatively, a diameter of the 90% encircled energy at a wide-angle end in the case where said image-formation optical system is a zoom optical system, and P is a pixel pitch in mm of the image pickup device.

5. (Amended) An image pickup system according to claim 1, wherein said image-formation optical system is a zoom lens including a wide-angle end, in which a half angle of view with respect to a subject on an infinite object point is 36° or greater.

6. (Amended) An image pickup system according to claim 1, wherein said image-formation optical system is of image-formation capability satisfying the following condition (8):

$$1.5 < \phi_w / P, 8.0 \quad \dots(8)$$

where ϕ_w is a diameter in mm of a 90% encircled energy of a point spread function by amplitude by an optical system at an f number of F5.6 at substantially the center of an image plane and a wavelength e-line, from which a low-pass action due to an optical low-pass filter is eliminated or, alternatively, a diameter of the 90% encircled energy at a wide-angle end in the case where said image-formation optical system is a zoom optical system, and P is a pixel pitch in mm of the image pickup device.

Add the following new claims:

7. An image pickup system according to claim 2, wherein an image pickup plane of said electronic image pickup device has a diagonal length D capable of meeting the following condition (5):

$$5 \text{ mm} < D < 30 \text{ mm} \quad \dots(5)$$

8. An image pickup system according to claim 2, wherein said image-formation optical system has an image-formation capability that satisfies the following condition (6), and said electronic image pickup device satisfies the following condition (7):

$$1.05 < \varphi_w/P \times \sqrt{(3.5/N)} < 8 / 0 \quad \dots(6)$$

$$0.0015 < P < 0.008 \text{ (mm)} \quad \dots(7)$$

where φ_w is a diameter in mm of a 90% encircled energy of a point spread function by amplitude by an optical system at an f number of F5.6 at substantially the center of an image plane and a wavelength e-line, from which a low-pass action due to an optical low-pass filter is eliminated or alternatively, a diameter of the 90% encircled energy at an wide-angle end in the case where said image-formation optical system is a zoom optical system, and P is a pixel pitch in mm of the image pickup device.

9. An image pickup system according to claim 2, wherein said image-formation optical system is a zoom lens including a wide-angle end, in which a half angle of view with respect to a subject on an infinite object point is 36° or greater.

10. An image pickup system according to claim 2, wherein said image-formation optical system is of image-formation capability satisfying the following condition (8):

$$1.5 < \varphi_w/P, 8.0 \quad \dots(8)$$

where φ_w is a diameter in mm of a 90% encircled energy of a point spread function by amplitude by an optical system at an f number of F5.6 at substantially the center of an image plane and a wavelength e-line, from which a low-pass action due to an optical low-pass filter is eliminated or, alternatively, a diameter of the 90% encircled energy at a wide-angle end in the case where said image-formation optical system is a zoom optical system, and P is a pixel pitch in mm of the image pickup device.